

METHOD AND SYSTEM FOR TESTING A PROCESSOR

Abstract of the Disclosure

A method for verifying the correctness of the functional behavior of a processor cooperating with software is provided. Furthermore, the method allows verification of a CPU having at least a part of its instruction set implemented with microcode. First, the microcode is independently tested by using a functional emulator performing in the same way as the processor hardware according to the processor's functional specification. Then, the microcode is tested by using a hardware emulator behaving in the same way as the processor hardware according to the design of the processor's logic gates. Finally, the microcode is tested against the actual processor hardware. This method allows the functionality of a newly designed CPU to be checked in a simulation, even before actual system integration. Advantageously, many problems in this area, relating to the interaction of the microcode and the processor hardware can be found before the actual processor hardware is manufactured. Furthermore, the ongoing verification of the newly designed CPU using the method according to the present invention allows detection of problems with the processor hardware at a relatively early stage.